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ENVIRONMENT

Mr. Michael Berkoff
Remedial Project Manager
USEPA Region 5
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Chicago, Illinois 60604-3507

Subject:
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Willow Boulevard/A-Site Landfill Operable Unit 2 Remedial Design
Progress Report #22 (July 1 to 31, 2012)

Date:
August 14, 2012

Contact:
Pat McGuire

Phone:
315.671.9233

Email:
pat.mcguire@arcadis-us.com

Our ref:
B0064581.0003.00014 /
B0064582.0003.00014

Dear Michael:

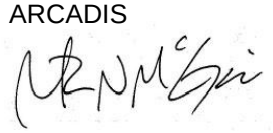
Attached is the 22nd progress report for the Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund Site Willow Boulevard/A-Site Landfill Operable Unit 2 (WB/A-Site OU) Remedial Design/Remedial Action. This progress report is submitted in accordance with Paragraph 31, Reporting Requirements, of the 2009 Consent Decree (CD) for the Design and Implementation of Certain Response Actions at Operable Unit 2 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Civil Action Number 1-09-cv-429).

As agreed, ARCADIS submitted progress reports once every three months throughout the remedial design phase. ARCADIS started submitting monthly progress reports when construction began at the WB/A-Site OU on May 30, 2011. This 22nd progress report describes activities/tasks performed between July 1 and 31, 2012.

If you have any questions, please do not hesitate to contact me.

Sincerely,

ARCADIS



Pat McGuire
Project Coordinator

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PROGRESS REPORT FOR THE ALLIED PAPER, INC./PORTAGE CREEK/ KALAMAZOO RIVER SUPERFUND SITE WILLOW BOULEVARD / A-SITE LANDFILL OPERABLE UNIT 2

REPORT #22 (JULY 1 TO 31, 2012)

PREPARED BY ARCADIS
AUGUST 14, 2012

ON BEHALF OF GEORGIA-PACIFIC LLC

SUBMITTED TO

MICHAEL BERKOFF, REMEDIAL PROJECT MANAGER
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Progress Report for the Allied Paper, Inc./Portage Creek/
Kalamazoo River Superfund Site
Willow Boulevard/A-Site Landfill Operable Unit 2

Report #22 (July 1 to 31, 2012)

Significant Developments and Activities During the Period

- On July 10, ARCADIS transmitted to the United States Environmental Protection Agency (USEPA) and Michigan Department of Environmental Quality (MDEQ) Design Notification No. 2012-025 (DN 2012-025) regarding substitution to the project-specified filter stone and select aggregate fill materials for the A-Site Landfill.

- On July 10, ARCADIS transmitted to Georgia-Pacific LLC (Georgia-Pacific), USEPA, MDEQ, CH2M HILL, and Terra Contracting, LLC (Terra) an agenda for the biweekly progress call scheduled for July 11.

- On July 10, USEPA transmitted to Georgia-Pacific and ARCADIS the CH2M HILL backup for the April 12, 2012 cost recovery package for the WB/A-Site OU.

- On July 11, MDEQ transmitted to ARCADIS an email requesting boring logs for AMW-3A-2, SB-3A-102, and SB-3A-104. On the same day, MDEQ verbally withdrew this request and informed ARCADIS that these boring logs are available to MDEQ.

- On July 11, representatives of ARCADIS, Georgia-Pacific, USEPA, MDEQ, CH2M HILL, and Terra participated in the biweekly progress call to discuss construction activities at the A-Site Landfill AMW-3A area.

- On July 13, ARCADIS transmitted to USEPA the WB/A-Site OU Progress Report No. 21.

- On July 16, ARCADIS transmitted to MDEQ a public education plan in support of the phosphorus Total Maximum Daily Load (TMDL).

- On July 18, ARCADIS transmitted to USEPA and MDEQ Design Notification No. 2012-026 providing details of the supplemental investigation and excavation activities conducted in the AMW-3A area.

- On July 18, MDEQ transmitted to ARCADIS an email acknowledging receipt of public education plan in support of the phosphorus TMDL.

- On July 20, USEPA provided Georgia-Pacific with verbal approval for DN 2012-025.

- On July 24, ARCADIS transmitted to Georgia-Pacific, USEPA, MDEQ, CH2M HILL, and Terra an agenda for the monthly Stakeholders' meeting scheduled for July 25.

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- On July 25, representatives of ARCADIS, Georgia-Pacific, USEPA, MDEQ, CH2M HILL, and Terra participated in the Stakeholders' meeting/call at the WB/A-Site OU.

- On July 27, ARCADIS transmitted to USEPA comments on the April 12, 2012 cost recovery package for the WB/A-Site OU.

Data Collected and Field Activities Conducted During the Period

- During the week of July 2, Terra continued to excavate the east side of the A-Site Landfill and consolidated excavated materials onto the A-Site Landfill. Also, during this week, Terra backfilled the perimeter bench along the north side of the A-Site Landfill, welded sections of gas-venting pipes in preparation for the gas cut off trench construction, watered the seeded area of the Willow Boulevard Landfill, and performed dust monitoring and suppression activities along the access roads by spraying water. On July 2, Cardno JFNew (JFNew) completed planting of trees in the Area East of Davis Creek. On July 2 and 3, Terra excavated material from the northwest side of the A-Site Landfill and decontaminated logs stockpiled on the A-Site Landfill prior to transferring them to the Area East of Davis Creek Extension. Also on July 2 and 3, Prein & Newhof conducted as-built survey of the A-Site Landfill. On July 2, 3, and 5, Terra performed grading activities on the eastern slope of the A-Site Landfill. Soil and Material Engineering (SME) conducted in-place moisture-density testing on consolidated materials on the A-Site Landfill on July 2, 3, and 6. On July 3, Terra placed grade stakes on the A-Site Landfill surface. Also on July 3, JFNew spread mulch in the Area East of Davis Creek. On July 5 and 6, Terra graded the west side of the A-Site Landfill. Also on July 5 and 6, JFNew spread mulch in the Willow Boulevard Landfill and the Area East of Davis Creek. On July 6, JFNew watered the seeded area and placed stakes around trees planted in the Area East of Davis Creek. Onsite wastewater treatment was not conducted during this week.

- During the week of July 2, ARCADIS collected ambient air monitoring samples on July 3 and forwarded them to TestAmerica Laboratories, Inc. (TestAmerica) for polychlorinated biphenyl (PCB) analysis (W1P131 through W3P131). Details are provided in Table A.

- During the week of July 9, Terra watered the seeded and vegetated areas of the Willow Boulevard Landfill and performed dust monitoring and suppression activities (i.e., spraying water) along the A-Site Landfill access roads. Also, during this week, Prein & Newhof conducted as-built survey of the A-Site Landfill and placed grade stakes on the A-Site Landfill. On July 9, Terra continued grading the west side of the A-Site Landfill. Also on July 9, Terra decontaminated construction supplies (crane mats, truck mats, and logs) for transportation offsite. On the same day, Terra removed the existing central access road across the A-Site Landfill. Terra started excavation in the northern excavation area of the AMW-3A area on July 9 and continued through July 11. Excavated materials from the AMW-3A area were placed in a roll-off box and transported to the A-Site Landfill for consolidation. On July 9 and 10, Terra backfilled the perimeter bench along the east side of the A-Site Landfill. From July 9 through 12, Terra

continued to weld sections of the gas-venting pipes. On July 10, Terra relocated the decontamination pad and conex boxes from the east side of the A-Site Landfill to the lined pad located on southwest side of the Area East of Davis Creek. On the same day, JFNew continued to place stakes around the trees planted in the Willow Boulevard Drainageway and in the Area East of Davis Creek, and watered vegetated areas in the Area East of Davis Creek. On July 10 and 11, Terra removed the fence and conducted additional clearing activities in the AMW-3A area to excavate residuals extending beyond the design limits. Terra performed grading activities across the plateau area and hinge point of the A-Site Landfill from July 10 through 12 to achieve the plateau elevation 3 feet below the design grade. On July 11, Terra graded the western side and southwest slope of the A-Site Landfill and excavated pits around the northern and eastern slopes for installation of stand-alone gas vents. On the same day, JFNew placed stakes around plants and watered vegetated areas in the Area East of Davis Creek. On July 11 and 12, Terra backfilled the excavation areas in the Area South of A-Site Berm to the current water elevation using dry well stone. On July 12, Terra excavated a trench on the east side of the A-Site Landfill to bury the tie-back cables from the sheet pile wall. On the same day, Terra excavated seep areas around the north side of the A-Site Landfill and backfilled them using dry well stone. On July 13, Terra continued to restore banks along Davis Creek on the eastern side of the A-Site Landfill by removing and reinstalling restoration stone to the design grade. On the same day, Terra started placement of the 12-inch thick gas-venting sand layer on the northwestern slope of the A-Site Landfill. Onsite wastewater treatment was not conducted during this week.

- During the week of July 9, ARCADIS collected three ambient air monitoring samples (W1P132 through W3P132) and 10 soil confirmation samples (W70946 through W70955); and forwarded them to TestAmerica for PCB analysis. Details are provided in Table A.

- During the week of July 16, Terra watered the seeded areas of the Willow Boulevard Landfill. From July 16 through 18, Terra performed dust monitoring and suppression activities (i.e., spraying water) along the access roads. From July 16 through 19, Prein & Newhof installed grade stakes on the A-Site Landfill and conducted as-built survey of the A-Site Landfill. SME conducted in-place moisture-density testing at the A-Site Landfill on July 16, 18, and 20 and observed proof-rolling on the western side of the A-Site Landfill on July 17. From July 16 through 18, Terra installed the gas-cutoff trench in the southwest corner of the A-Site Landfill and placed a 12-inch thick layer of gas-venting sand on the northern slope of the A-Site Landfill. On July 16 and 17, Terra continued construction of the eastern bench and restoration of Davis Creek banks on the A-Site Landfill. On July 17, Terra installed an 18-inch diameter culvert in the southwest corner of the A-Site Landfill. On the same day, a representative of the Kalamazoo County Drain Commission approved the construction of a proposed second crossing of Davis Creek (north of the existing access bridge crossing) to alleviate traffic issues associated with having only a single access bridge to the landfill. On July 17 and 18, Terra placed and welded sections of gas collection pipes wrapped in a geotextile fabric into the gas-cutoff trench starting in the southwest corner of the A-Site Landfill. On July 19, Terra installed silt fence on the northern side of the A-Site Landfill to prevent erosion of the gas-venting sand layer. On the same day, Terra installed standalone

gas vents on the A-Site Landfill and conducted additional excavation in the northern excavation area of the AMW-3A area. Excavated materials from the AMW-3A area were transported to the A-Site Landfill for consolidation. ARCADIS measured a stormwater velocity of approximately 3 feet per second in Davis Creek on July 19 to assist in the design of the second bridge crossing. On July 19 and 20, Terra continued to excavate the perimeter bench along the east side of the A-Site Landfill. On July 20, Terra consolidated excavated materials on the east side of the A-Site Landfill plateau area and started backfilling the perimeter bench along the east side of the A-Site Landfill. On the same day, Terra repaired washouts from stormwater runoff in the gas-venting sand layer on the north side of the A-Site Landfill and installed additional silt fence in this location for further erosion protection. Also on July 20, ARCADIS and Terra surveyed the location of the proposed second crossing of Davis Creek. Water was treated in the onsite wastewater treatment system on July 20, and the treated effluent was discharged into Davis Creek at Outfall 003A. Flocculant was added during wastewater treatment on this day.

- During the week of July 16, ARCADIS collected five wastewater treatment samples (W77129 through W77133) and forwarded them to KAR Laboratories, Inc. (KAR) for PCB analysis. Two wastewater treatment samples (W77132 and W77133) were also forwarded to KAR for phosphorus analysis. Additionally, one backfill sample (W70956) and three ambient air monitoring samples (W1P133 through W3P133) were collected and forwarded to TestAmerica for PCB analysis. The backfill sample (W70956) was also forwarded for non-PCB analysis. Details are provided in Table A.

- During the week of July 23, Terra continued placement of gas-venting sand and construction of the gas collection system at the A-Site Landfill. On July 23, Terra watered the restored areas of the Willow Boulevard Landfill, excavated material from the east side of the A-Site Landfill, and backfilled the area north of the access bridge to the A-Site Landfill to re-establish the access road. On July 23 and 24, SME conducted in-place moisture-density testing at the A-Site Landfill. From July 23 through 25, Terra consolidated excavated materials onto the A-Site Landfill plateau area. From July 23 through 26, Terra continued to place the 12-inch thick layer of gas-venting sand on the northern and eastern slopes of the A-Site Landfill and continued construction of the gas-cutoff trench on the south side of the Landfill. From July 23 through 27, Terra welded sections of high-density polyethylene (HDPE) pipes for installation in the gas-cutoff and pore water collection trenches. Prein & Newhof conducted as-built survey of the A-Site Landfill and installed grade stakes on the A-Site Landfill from July 23 through 27. On July 25 and 28, Terra conducted dust monitoring at the A-Site Landfill. On July 27 and 28, Terra continued to place the 12-inch thick layer of gas-venting sand on the consolidated area and in the lower gas cutoff trench on the south side of the A-Site Landfill. On July 27, Terra conducted additional excavation in the northern portion of the AMW-3A area. On July 28, Terra installed HDPE pipes wrapped with geotextile fabric in the gas-cutoff trenches and graded the plateau area of the A-Site Landfill. Onsite wastewater treatment was not conducted during this week.

Progress Report for the Allied Paper, Inc./Portage Creek/
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Report #22 (July 1 to 31, 2012)

- During the week of July 23, ARCADIS collected one backfill sample (W70957) and three air monitoring samples (W1P134 through W3P134) and forwarded them to TestAmerica for PCB analysis. The backfill sample (W70957) was also forwarded for non-PCB analysis. Additionally, three soil confirmation samples (W70958 through W70960) were collected and forwarded to KAR for PCB analysis. Details are provided in Table A.

- On July 30 and 31, Terra continued to place the 12-inch thick layer of gas-venting sand on the consolidated area and in the lower gas-cutoff trench on the south side of the A-Site Landfill . Also on July 30 and 31, Terra continued to grade the A-Site Landfill plateau area, backfilled the lower gas cut-off trench using dry well stone, and welded HDPE pipe for the gas collection system. On July 30, Terra conducted dust monitoring at the A-Site Landfill. On July 31, Terra started construction of the temporary access road on the south sideslope of the A-Site Landfill for gas-venting sand placement. On the same day, Terra performed additional excavation in the northern portion of the AMW-3A area. Also on July 30, Terra removed irrigation equipment from the Willow Boulevard Landfill. Onsite wastewater treatment was not conducted on July 30 and 31.

- ARCADIS collected one soil confirmation sample (W70961) on August 31 and forwarded it to KAR for PCB analysis. Details are provided in Table A.

Laboratory Data Received During the Period

- On July 3, ARCADIS received arsenic results for test pit soil sample W70943 from TestAmerica. Unvalidated results are provided in Table A.

- On July 5, ARCADIS received PCB analytical results for surface water samples W76179 through W76181 from KAR. Unvalidated results are provided in Table A.

- On July 17, ARCADIS received PCB analytical results for air monitoring samples W1P130 through W3P130, W1P131 through W3P131, and W1P132 through W3P132 from TestAmerica. Unvalidated results are provided in Table A.

- On July 18, ARCADIS received PCB analytical results for soil confirmation samples W70946 through W70955 from TestAmerica. Unvalidated results are provided in Table A.

- On July 23, ARCADIS received PCB analytical results for wastewater treatment samples W77132 and W77133 from KAR. Unvalidated results are provided in Table A.

- On July 30, ARCADIS received PCB analytical results for soil confirmation samples W70958 through W70960 from KAR. Unvalidated results are provided in Table A.

Progress Report for the Allied Paper, Inc./Portage Creek/
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Report #22 (July 1 to 31, 2012)

- On July 31, ARCADIS received PCB analytical results for wastewater treatment samples W77129 through W77131 and soil confirmation sample W70961, and phosphorus analytical results for wastewater treatment samples W77132 and W77133 from KAR; and PCB analytical results for air monitoring samples W1P133 through W3P133 from TestAmerica. Unvalidated results are provided in Table A.

- ARCADIS is awaiting analytical results for two backfill samples (W70956 and W70957) and three air monitoring samples (W1P134 through W3P134) from TestAmerica.

Issues Encountered and Actions Taken

- On July 2, two high dust readings of 0.182 milligrams per cubic meter (mg/m^3) and 0.157 mg/m^3 were measured by the hand-held dust monitor in the northwest corner and on the northwest side of the A-Site Landfill. Because this level was above the action level of 0.15 mg/m^3 (as specified in the Final Design Report), Terra increased dust suppression efforts by spraying water in this area; dust levels returned to below 0.15 mg/m^3.

- On July 2, a pump was stolen from the Willow Boulevard Landfill. This incident was reported to the Kalamazoo Police Department and more security locks were purchased. Security measures were discussed during the afternoon health and safety meeting and it was decided that small equipment will no longer be left overnight out on the landfill. The pump was recovered in the afternoon.

- On July 3, ARCADIS received arsenic results for one test pit sample (W70943) collected from the wedge material located along Davis Creek on the east side of the A-Site Landfill, which exceeded both the residential and non-residential direct contact criterion of 7.6 and 11.1 milligrams per kilogram (mg/kg), respectively. This material was therefore excavated and consolidated onto the A-Site Landfill.

- On July 5, two high dust readings of 0.218 mg/m^3 and 0.191 mg/m^3 were recorded in the east and west sides of the A-Site Landfill, respectively. In response, Terra increased dust control measures (i.e., spraying water) and the dust reading returned to below 0.15 mg/m^3.

- On July 5, Terra stopped work an hour early due to extreme weather conditions (high temperature).

- On July 6, two high dust readings of 0.191 mg/m^3 and 0.151 mg/m^3 were recorded in the east side of the A-Site Landfill. In response, Terra increased dust control measures (i.e., spraying water) and dust readings returned to below 0.15 mg/m^3.

- On July 6, Terra stopped work an hour and a half early due to extreme weather conditions (high temperature).

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- On July 9, a high dust reading of 0.183 mg/m^3 was recorded on the plateau area of the A-Site Landfill. In response, Terra increased dust control measures (i.e., spraying water) and dust readings returned to below 0.15 mg/m^3.

- On July 17, it was observed that sediment had accumulated at the silt fence installed in the Willow Boulevard Drainageway (on the south side of the land bridge). To prevent further sediment accumulation and runoff to the Willow Boulevard Drainageway, Terra replaced 30 feet of silt fence installed on the south side of the Willow Boulevard Drainageway.

- On July 18, ARCADIS received PCB analytical results of 57.4 J mg/kg and 7.59 J mg/kg[1] for two soil confirmation samples (W70947 and W70953) collected from the northern excavation area of the AMW-3A area. Because these samples exceeded the 6.5 mg/kg performance standard criterion, additional excavation was conducted at these locations during the week of July 23 and additional soil confirmation samples (W70958 through W70960) were collected. PCB analytical results for samples W70958 and W70959 were below the 6.5 mg/kg criterion (see Table A). PCB analytical results for sample W70960 are discussed below.

- On July 18, two high dust readings of 0.163 mg/m^3 and 0.19 mg/m^3 were recorded in the east side of the A-Site Landfill. In response, Terra increased dust control measures and dust readings returned to below 0.15 mg/m^3.

- On both July 18 and 19, work was stopped for approximately 30 minutes due to lightning.

- On July 19 and 20, dust monitoring was not conducted due to wet conditions across the site.

- On July 23 and 24, dust monitoring was not conducted due to wet conditions across the site.

- On July 24, work was stopped for approximately 90 minutes due to lightning.

- On July 26, work was stopped for approximately two and half hours due to lightning.

- On July 26 and 27, dust monitoring was not conducted due to wet conditions across the site.

[1] J qualifier indicates that result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

- On July 30, ARCADIS received PCB analytical result of 120 mg/kg for one soil confirmation sample (W70960) collected from the northern excavation area of the AMW-3A area. Because this sample exceeded the 6.5 mg/kg performance standard criterion, additional excavation was conducted at this location on July 31 and additional soil confirmation sample (W70961) was collected. The PCB analytical result for sample W70961 was below the 6.5 mg/kg criterion (see Table A).

- On July 31, dust monitoring was not conducted due to wet conditions across the site.

Developments Anticipated During the Next Reporting Period

- In August, construction activities are scheduled to continue in the A-Site Landfill with construction of the gas collection system, consolidation of residuals, and installation of the gas-venting sand layer scheduled to be completed. Chesapeake Containment System, Inc. is scheduled to be onsite to begin installation of the liner and geocomposite starting the week of August 6. Import and placement of the soil cover layer is schedule to begin once a portion of the liner and geocomposite has passed the required quality control testing. Backfilling and grading to final restoration grades in the Area South of A-site is also scheduled to be completed. Decontamination of equipment, treatment and discharge of the remaining wastewater, and demobilization of the wastewater treatment system and pad are expected to be completed. Terra's current schedule is attached for information.

- Weekly air sampling for PCBs will continue until the gas-venting sand layer has been completed (i.e. all exposed residuals have been covered). After the gas-venting layer is complete, no further air monitoring is anticipated.

- Surface water sampling for PCBs has been completed for 2012 construction activities. Surface water sampling is anticipated during removal of sheet pile wall from the north side of the A-Site Landfill (currently scheduled for April 2013).

- In August, ARCADIS will send to USEPA an email providing notification of modification to the monitoring program.

- Biweekly progress calls with representatives of ARCADIS, Georgia-Pacific, USEPA, MDEQ, CH2M HILL, and Terra are expected to continue during the month of August.

- On August 16, ARCADIS (on behalf of Georgia-Pacific) will attend the Phosphorus Point Source meeting in Kalamazoo, Michigan.

- The monthly Stakeholder meeting is scheduled for August 23.

- In August, Georgia-Pacific anticipates a response from USEPA regarding the CH2M HILL charges for the WB/A-Site OU cost recovery package.

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- In August, possible design and construction of a second crossing for Davis Creek will be completed.
- Submittal of a revised approach to the groundwater monitoring system design will be provided to USEPA and MDEQ in August.
- In August, ARCADIS anticipates receiving written approval from USEPA for Design Notification Nos. 2012-024 and 2012-026.

Georgia-Pacific LLC
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Willow Boulevard/A-Site Landfill Operable Unit 2
Progress Report #22

Table A — Summary of Samples Collected and Data Received in July 2012

Sample ID	Sample Date	Data Received	Laboratory	Sample Description/Location	Analysis Conducted	Analyte Result[1]	Action Limit[2]	Unit	Response Action/Notes
Backfill Samples[3]									
W70956	7/16/12	NR	TAL	Gas Venting Sand	-	-	-	-	-
W70957	7/27/12			Gas Venting Sand	-	-	-	-	-
Air Monitoring Samples[4]									
W1P130	6/27/12	7/17/12	TAL	Near King Highway Bridge	PCBs	0.0030	0.2	µg/m^3	None
W2P130				Area East of Davis Creek	PCBs	0.0074	0.2	µg/m^3	None
W3P130				Area East of Davis Creek Extension (Olmstead Road)	PCBs	0.0037	0.2	µg/m^3	None
W1P131	7/3/12			Near King Highway Bridge	PCBs	0.0032	0.2	µg/m^3	None
W2P131				Area East of Davis Creek	PCBs	0.019	0.2	µg/m^3	None
W3P131				Area East of Davis Creek Extension (Olmstead Road)	PCBs	0.0046	0.2	µg/m^3	None
W1P132	7/12/12			Near King Highway Bridge	PCBs	0.0036	0.2	µg/m^3	None
W2P132				Area East of Davis Creek	PCBs	0.011	0.2	µg/m^3	None
W3P132				Area East of Davis Creek Extension (Olmstead Road)	PCBs	0.0020	0.2	µg/m^3	None
W1P133	7/19/12	7/31/12		Near King Highway Bridge	PCBs	0.0024	0.2	µg/m^3	None
W2P133				Area East of Davis Creek	PCBs	0.014	0.2	µg/m^3	None
W3P133				Area East of Davis Creek Extension (Olmstead Road)	PCBs	0.0046	0.2	µg/m^3	None
W1P134	7/26/12	NR		Near King Highway Bridge	PCBs	-	0.2	µg/m^3	-
W2P134				Area East of Davis Creek	PCBs	-	0.2	µg/m^3	-
W3P134				Area East of Davis Creek Extension (Olmstead Road)	PCBs	-	0.2	µg/m^3	-
Surface Water Samples[5]									
W76179	6/26/12	7/5/12	KAR	200 feet upstream of work area (A-Site Landfill)	PCBs	0.1 U	0.2	µg/L	None
W76180				300 feet downstream of work area (A-Site Landfill)	PCBs	0.1 U	0.2	µg/L	None
W76181	6/27/12			Rinse Blank 21	PCBs	0.1 U	0.2	µg/L	None
Soil Confirmation Samples[6]									
W70946	7/12/12	7/18/12	TAL	AMW-3A Area (Northern Excavation Area - North Sidewall)	PCBs	1.79	6.5	mg/kg	None
W70947				AMW-3A Area (Northern Excavation Area - West Sidewall)	PCBs	57.4 J	6.5	mg/kg	Area Re-excavated
W70948				AMW-3A Area (Northern Excavation Area - South Sidewall)	PCBs	1.11 J	6.5	mg/kg	None
W70949				AMW-3A Area (Northern Excavation Area - East Sidewall)	PCBs	0.135 J	6.5	mg/kg	None
W70950				AMW-3A Area (Northern Excavation Area - Base)	PCBs	1.3 J	6.5	mg/kg	None
W70951				AMW-3A Area (Northern Excavation Area - Base)	PCBs	0.248 J p	6.5	mg/kg	None
W70952				AMW-3A Area (Northern Excavation Area - Base)	PCBs	0.1397 J	6.5	mg/kg	None
W70953				AMW-3A Area (Northern Excavation Area - Base)	PCBs	7.59 J	6.5	mg/kg	Area Re-excavated
W70954				AMW-3A Area (Northern Excavation Area - Base)	PCBs	0.33	6.5	mg/kg	None
W70955				Duplicate of Sample W70950	PCBs	1.41	6.5	mg/kg	None
W70958	7/27/12	7/30/12	KAR	AMW-3A Area (Northern Excavation Area - West Sidewall)	PCBs	0.33 U	6.5	mg/kg	None
W70959				AMW-3A Area (Northern Excavation Area - Base)	PCBs	0.33 U	6.5	mg/kg	None
W70960				AMW-3A Area (Northern Excavation Area - South Sidewall)	PCBs	120	6.5	mg/kg	Area Re-excavated
W70961	7/31/12	7/31/12		AMW-3A Area (Northern Excavation Area - South Sidewall)	PCBs	0.33 U	6.5	mg/kg	None

See Notes on Page 2.

Georgia-Pacific LLC
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Willow Boulevard/A-Site Landfill Operable Unit 2
Progress Report #22

Table A — Summary of Samples Collected and Data Received in July 2012

Sample ID	Sample Date	Data Received	Laboratory	Sample Description/Location	Analysis Conducted	Analyte Result[1]	Action Limit[2]	Unit	Response Action/Notes
Wastewater Treatment Samples[7]									
W77129	7/20/12	7/31/12	KAR	Influent	PCBs	0.2	-	µg/L	None
W77130				Midfluent (Tank A-C)	PCBs	0.1 U	0.2	µg/L	None
W77131				Midfluent (Tank B-D)	PCBs	0.1 U	0.2	µg/L	None
W77132		7/23/12		Effluent (Tank A-C)	PCBs	0.1 U	0.2	µg/L	None
		7/31/12			Phosphorus	0.06	-	mg/L	None
W77133		7/23/12		Effluent (Tank B-D)	PCBs	0.1 U	0.2	µg/L	None
		7/31/12			Phosphorus	0.12	-	mg/L	None
Test Pit Samples									
W70943	6/27/12	7/3/12	TAL	East Side of the A-Site Landfill - Lower Wedge Test Pit No. 1	Arsenic	229	7.6	mg/kg	Area Excavated

Notes:

1 - All presented sample results are unvalidated.

2 - Analytical results for backfill samples and test pit samples are compared to applicable Part 201 cleanup criteria and Part 213 RBSLs provided in MDEQ's RRD Operational Memorandum No. 1 (Table 2, Column #19, Direct Contact Criteria & RBSLs [http://www.michigan.gov/documents/deq/deq-rrd-OpMemo_1-Attachment1Table2SoilResidential_283553_7.pdf]).

3 - Backfill samples are analyzed for TCL VOCs, TCL SVOCs, PCBs, Chlorinated Pesticides, TPH (DRO), TPH (GRO), and RCRA Metals.

4 - Rule 225(3) of Part 55, Act 451 as amended allows for a ten-fold increase in the SRSL of 0.02 µg/m^3 if the ambient impacts occur on industrial property or public roadways. The action level for PCBs is therefore anticipated to be 0.2 µg/m^3, which is ten times the SRSL.

5 - Analytical results for surface water samples are compared to applicable Part 201 cleanup criteria and Part 213 RBSLs provided in MDEQ's RRD Operational Memorandum No. 1 (Table 1, Column #3, Groundwater Surface Water Interface Criteria [http://www.michigan.gov/documents/deq/deq-rrd-OpMemo_1-Attachment1Table1GW_283547_7.pdf].

6 - In accordance with the Final Design Report, for all portions of the AMW-3A area, the basis of design is the sediment cleanup criterion of 6.5 mg/kg.

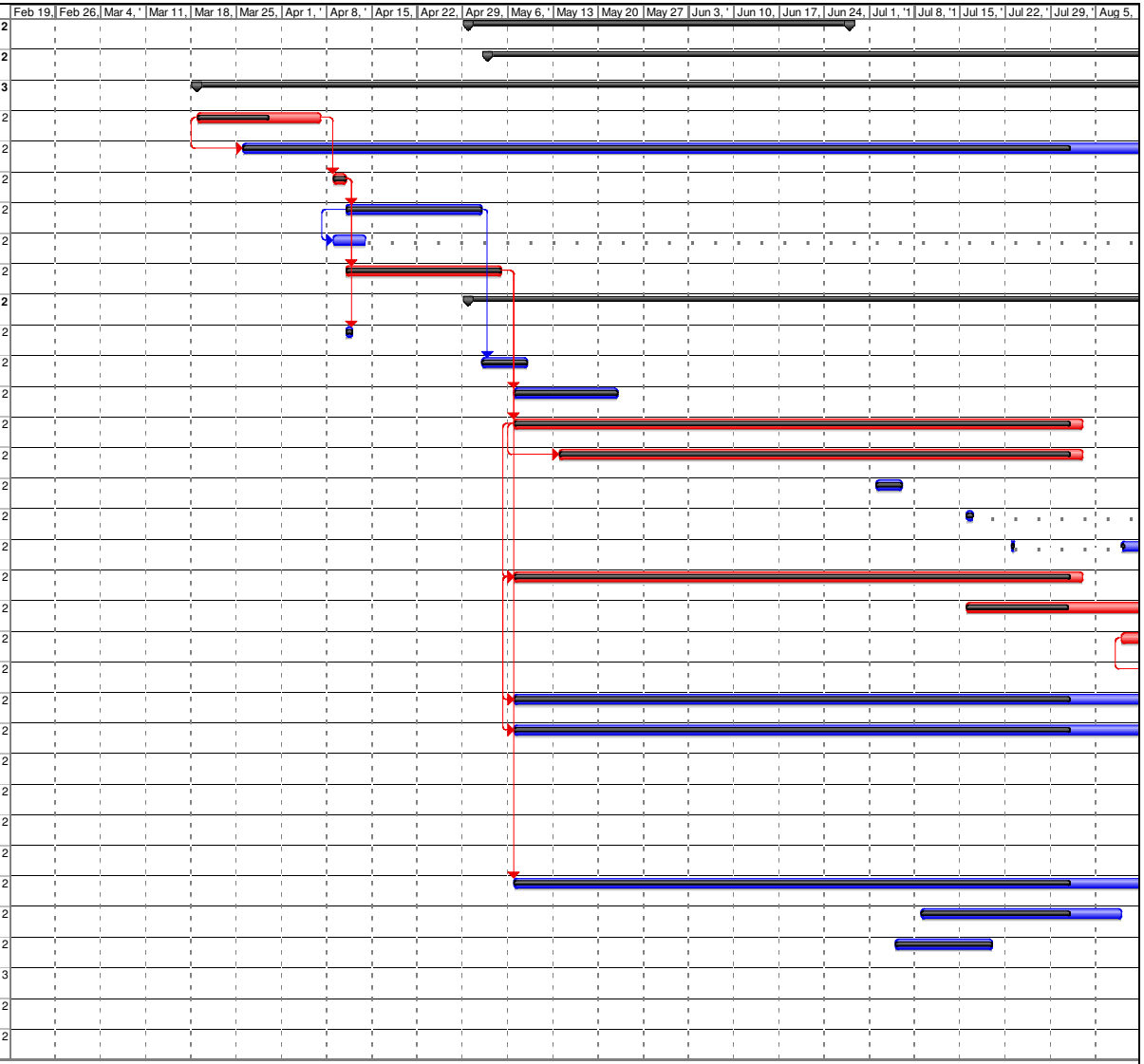
7 - In accordance with the Final Design Report and Substantive Requirements Document No. MIU990030, the action limit for wastewater treatment samples is 0.2 µg/L.

DROs - diesel range organics
GROs - gasoline range organics
J - Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
KAR - KAR Laboratories, Inc.
MDEQ - Michigan Department of Environmental Quality
mg/kg - milligrams per kilogram
mg/L - miligrams per liter
NR - not received
PCBs - polychlorinated biphenyls
p - The % RPD between the primary and confirmation column/detector is greater than 40%. The lower value has been reported.
RBSL - Risk Based Screening Level
RCRA - Resource Conservation and Recovery Act
RRD - Remediation & Redevelopment Division
SRSL - secondary risk screening level
SVOCs - semivolatile organic compounds
TAL - TestAmerica Laboratories, Inc.
TCL - target compound list
TPH - total petroleum hydrocarbons
VOCs - volatile organic compounds
µg/L - micrograms per liter
µg/m^3 - micrograms per cubic meter
U - Compound analyzed but not detected at a concentration above the reporting limit

ARCADIS

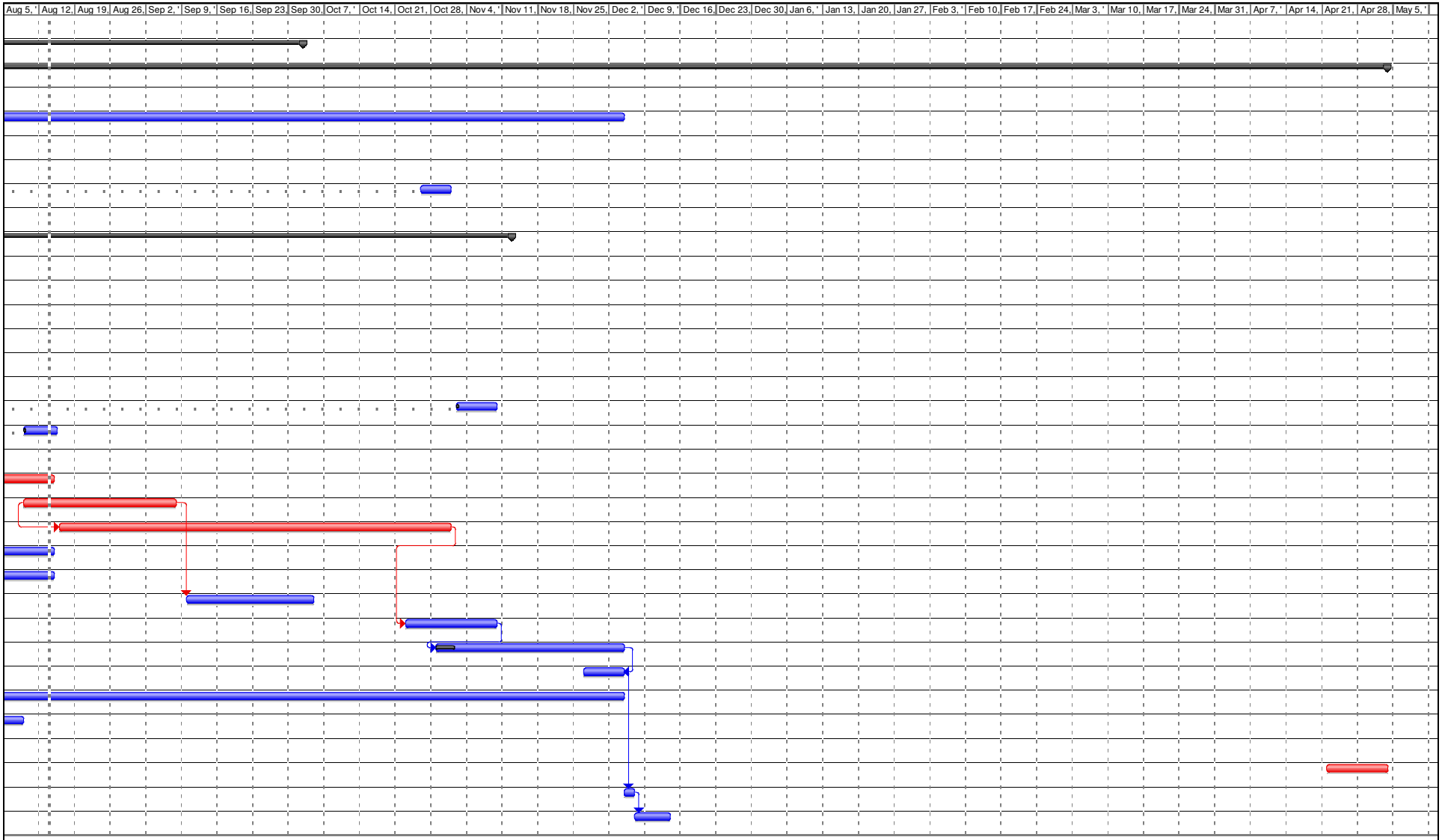
Terra Construction Schedule

ID	% Complete	Task Name	Duration	Start	Finish
1	**93%**	**East of Davis Creek**	**42 days**	**Mon 4/30/12**	**Wed 6/27/12**
6	**97%**	**Willow Blvd. Landfill Cap**	**106 days**	**Thu 5/3/12**	**Tue 10/2/12**
20	**58%**	**A Site Schedule**	**288 days**	**Mon 3/19/12**	**Fri 5/3/13**
21	60%	Planning and Submittals	15 days	Mon 3/19/12	Fri 4/6/12
22	51%	Project Management, Meeting, Site Visits	177 days	Mon 3/26/12	Tue 12/4/12
23	100%	Mobilization (temp construction facilities, sanita	2 days	Mon 4/9/12	Tue 4/10/12
24	100%	Clearing and Grubbing	15 days	Wed 4/11/12	Tue 5/1/12
25	0%	Construction of Access Roads (Temp & Permanent)	9 days	Mon 4/9/12	Wed 10/31/12
26	100%	Temp Erosion and Sediment Control Measures	18 days	Wed 4/11/12	Fri 5/4/12
27	**42%**	**Site Survey and Soil Delineations**	**138 days**	**Mon 4/30/12**	**Mon 11/12/12**
34	100%	Dewatering Enclosure	1 day	Wed 4/11/12	Wed 4/11/12
35	100%	Groundwater Monitoring Well Abandonment	5 days	Wed 5/2/12	Tue 5/8/12
36	100%	Perimeter Fence and Signage	12 days	Mon 5/7/12	Tue 5/22/12
37	97%	PCB Soils Excavation, Loading and Placement	62 days	Mon 5/7/12	Thu 8/2/12
38	96%	Non PCB Soil Excavation,load.Place	57 days	Mon 5/14/12	Thu 8/2/12
39	100%	PCB Soils Exc/load/place/(AWM3)	3 days	Mon 7/2/12	Thu 7/5/12
40	20%	General Fill Material + Sand (North)	7 days	Mon 7/16/12	Fri 11/9/12
41	10%	A Site Drainageway Resrtoration	5 days	Mon 7/23/12	Wed 8/15/12
42	97%	Consolidated Materials/General Site Grading	62 days	Mon 5/7/12	Thu 8/2/12
43	55%	12" Sand Gas Venting Layer Placement	22 days	Mon 7/16/12	Tue 8/14/12
44	0%	Liner Low Density Polyethylene Geomembrane & GDC	21 days	Thu 8/9/12	Fri 9/7/12
45	0%	24" Soil Drainage and Protection Layer Placement	54 days	Thu 8/16/12	Wed 10/31/12
46	86%	Site Dewatering Measures	70 days	Mon 5/7/12	Tue 8/14/12
47	86%	Temp WWTP (Supply and Operate)	70 days	Mon 5/7/12	Tue 8/14/12
48	0%	Porewater collection Piping (pipe, stone, geotext	19 days	Mon 9/10/12	Thu 10/4/12
49	0%	6" Vegetative Layer Placement	14 days	Tue 10/23/12	Fri 11/9/12
50	15%	Riverbank Restoration	25 days	Mon 10/29/12	Tue 12/4/12
51	0%	Landfill Seeding and Mulching	6 days	Tue 11/27/12	Tue 12/4/12
52	41%	Storm Water/Surface Water Management	147 days	Mon 5/7/12	Tue 12/4/12
53	74%	Gas Collection System	23 days	Mon 7/9/12	Wed 8/8/12
54	100%	Gas Cuttoff Line Trench	11 days	Thu 7/5/12	Thu 7/19/12
55	0%	Sheetpile removal	10 days	Mon 4/22/13	Fri 5/3/13
56	0%	Facility Removal	2 days	Wed 12/5/12	Thu 12/6/12
57	0%	Equipment Decon and Removal	5 days	Fri 12/7/12	Thu 12/13/12



Project: Willow Schedule
Date: Tue 8/14/12

Task
Critical Task
Progress
Milestone
Summary
Rolled Up Task
Rolled Up Critical Task
Rolled Up Milestone
Rolled Up Progress
Split
External Tasks
Project Summary
Group By Summary
Deadline



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